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(54) Title: IMMUNOLOGICAL DETECTION OF RNA: DNA HYBRIDS ON MICROARRAYS

(57) Abstract: The present invention provides a hybridization method and kit for the detection and measurement of biological molecules. A test sample containing the biological molecules of interest is hybridized with an unlabeled or optionally a detectably-labeled complementary biomolecule to form a double-stranded hybrid immobilized to a solid phase. The immobilized hybrid may be detected with an entity which specifically recognizes an RNA:DNA hybrid, followed by analyses and quantification. Therefore, the present invention provides a method and kit to detect and measure biological molecules that is simple to use, highly specific, sensitive, and accurate for screening a plurality of biological molecules.



INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER IPC 7 C12Q1/68 G01N G01N33/543 According to International Patent Classification (IPC) or to both national classification and IPC **B. FIELDS SEARCHED** Minimum documentation searched (classification system followed by classification symbols) IPC 7 C120 Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched Electronic data base consulted during the international search (name of data base and, where practical, search terms used) EPO-Internal, WPI Data, PAJ, MEDLINE, BIOSIS C. DOCUMENTS CONSIDERED TO BE RELEVANT Category 9 Citation of document, with indication, where appropriate, of the relevant passages Relevant to claim No. χ WO 01/36681 A (DIGENE CORPORATION) 1-15 25 May 2001 (2001-05-25) γ the whole document 16-22 WO 99/40224 A (DIGENE CORPORATION) 16-22 12 August 1999 (1999-08-12) the whole document WO 00/60116 A (TROPIX, INC) 12 October 2000 (2000-10-12) figures 10-15 Further documents are listed in the continuation of box C. Patent family members are listed in annex. Special categories of cited documents: "T" later document published after the international filing date or priority date and not in conflict with the application but "A" document defining the general state of the art which is not cited to understand the principle or theory underlying the considered to be of particular relevance invention "E" earlier document but published on or after the international "X" document of particular relevance; the daimed invention filing date cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another "Y" document of particular relevance; the daimed invention citation or other special reason (as specified) cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled "O" document referring to an oral disclosure, use, exhibition or other means document published prior to the international filing date but later than the priority date claimed in the art. "&" document member of the same patent family Date of the actual completion of the international search Date of mailing of the international search report 23 August 2005 05/09/2005 Name and mailing address of the ISA Authorized officer European Patent Office, P.B. 5818 Patentlaan 2 NL – 2280 HV Rijswijk Tel. (+31–70) 340–2040, Tx. 31 651 epo nl, Fax: (+31–70) 340–3016 Pilat, D

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